

## REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and the following commentary.

### I. Status of the Claims

Claims 2, 3, 5 and 10 are cancelled without prejudice or disclaimer. Claims 1, 4, and 6-9 have been amended, with ample support in the original specification and claims. For example, see the paragraph bridging pages 20 and 21, and page 33. Claims 11-15 have been added. The support for the new claims can be found in the original claims and throughout the specification, in particular at page 38, first and second full paragraphs.

Because no new matter is introduced, Applicants respectfully request entry of this amendment. Upon entry, claims 1, 4, 6-9 and 11-15 will be pending.

### II. Formalities

#### A. Priority Claim

As requested, Applicants herewith submit a certified English translation of the priority document, Japanese Patent Application No. 2003-71082, to perfect the priority claim.

#### B. Oath/Declaration

The Examiner asserts that the Oath/Declaration is defective for failing to identify the application number. Applicants herewith submit a corrected Oath/Declaration in compliance with 37 CFR § 1.67(a).

### **III. Objection to the Specification**

The Examiner has objected to the specification for omission of the SEQ ID NOs. Applicants have amended the specification to insert SEQ ID NOs.

The Examiner further requires Applicants amend the description to the drawings to identified the labels of the transgenic lines. The specification has been amended accordingly.

In view of the amendments, Applicants respectfully request withdrawal of the objection.

### **IV. Claim Objection**

In this action, the examiner has objected to claims 2-5 and 7-10 and requires that “non-elected subject matter must be removed from the claims” (Action, page 5, section 8). Claims 2 and 3 have been cancelled, with their recitations incorporated in claim 1.

Applicants previously responded to the species election requirement by electing rd29A as the promoter and DREB1A gene as the gene encoding the DNA binding protein, respectively, for initial consideration on the merits.

In contrast to a restriction requirement, the administrative expediency of a species election comprehends the prospect that a reasonable number of additional species, presently “non-elected,” will be considered when a given species within a recited genus is deemed patentable. See MPEP § 809.02(a). Accordingly, the present removal of non-elected species in claims 1, 4-5 and 7-10 is premature, pending a disposition pursuant to § 809.02(a) of the MPEP. Therefore, the stated basis for the objection is obviated.

### **V. Rejection of Claims under 35 U.S.C. § 112, second paragraph**

The Examiner has rejected claims 1-10 for alleged indefiniteness. Applicants respectfully traverse the rejection.

Claims 1 and 6 are rejected for the recitation of “improved.” The claims in question have been amended to specify that the improvement is relative to the plant that is not transformed by any DNA.

Claims 1, 3-4, 6, and 8-9 are rejected for the recitation of “gene.” The claims have been amended to delete the term.

Claims 1 and 6 are rejected for the recitation of “using a gene wherein a DNA encoding a protein” and for the recitation of “regulates the transcription of a gene...stress-responsive promoter,” respectively. The claims in question have been reworded to set forth the subject matter more clearly.

Claims 1, 3-4, 6 and 8-9 are rejected for the recitation of “downstream.” As demonstrated by Exhibit A, a print-out from the online Wikipedia encyclopedia, “downstream” is well-known term in the field of molecular biology. A gene located downstream a promoter or a stress-responsive element means that the gene is located to the 3’ end of the promoter or the element. Therefore, one skilled in the art would have understood the metes and bounds of this term.

Claim 1 is rejected for allegedly missing the step of gene expression. Claim 1 has been amended to recite “expressing the DNA in the transformed plant.”

Claims 4-5 and 9-10 are rejected for the recitation of “stringent conditions,” “complementary,” and for failing to identify the nucleotide sequences by their corresponding SEQ ID NOs. Claims 5 and 10 have been cancelled thereby rendering the issue moot. Claims 4 and 9 have been amended to delete the terms at issue and to recite the SEQ ID NOs.

Accordingly, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 112; second paragraph.

**VI. Rejection of Claims under 35 U.S.C. § 112, first paragraph**

The Examiner has rejected claims 1-10 for allegedly lack of enablement and written description for the nucleotide sequences having less than 100% identity to the rd29A promoter and to DREB1A gene. Claims 2, 3, 5 and 10 have been cancelled thereby mooting the rejection. Applicants respectfully traverse the rejection to the remaining claims.

The Examiner contends that the specification does not support a nucleotide sequence having at least 80% sequence identity to a DNA sequence of SEQ ID NO: 1 or the variants comprising deletion, additions, substitutions of one or more nucleotides. See Action, the paragraph bridging pages 9 and 10.

Claims 4 and 9 have been amended to recite a nucleotide sequence having at least 94% homology with one of the disclosed SEQ ID NOs and the sequence is further limited by its functional characterization of encoding a protein that is able to bind to the stress-responsive element. Moreover, the specification discloses the common sequences among the DREB proteins. Therefore, the skilled artisan is enabled to select the mutants that are 94% homologous to the disclosed DREB sequences while retaining the function of binding to the stress-responsive element based on the description in the specification.

The Examiner asserts that the specification does not support “*any* gene which comprises a promoter with a stress-responsive element and a coding sequence that encodes a protein that binds to a stress-responsive element of *any* stress-responsive promoter of *any* gene” (Action, page 13, first full paragraph; emphasis added).

Claim 1 presently prescribes the specific genes that belong to the DREB family and the particular stress-responsive promoters, which are fully supported by the specification. See, for example, page 5, second and third full paragraphs.

In view of the amendments to the claims and the foregoing discussion, the rejections under 35 U.S.C. § 112, first paragraph, should be withdrawn.

**VII. Rejection of Claims under 35 U.S.C. § 102 (b)**

The Examiner has rejected claims 1-10 for alleged anticipation by Kasuga *et al.*, *Nature Biotechnology* 17: 287-91 (1999). Applicants respectfully traverse the rejection.

The present invention relates to a transformed plant having improved rooting efficiency and/or prolonged vase life relative to the non-transformed plant. The examiner contends that the plant disclosed by Kasuga is transformed with an expression vector comprising stress-inducible rd29A promoter and DREB1A protein and therefore has the inherent properties of improved rooting efficiency and prolonged vase life. Applicants respectfully disagree.

The claimed plant comprises certain proteins, *e.g.*, a protein having the ability of inhibiting ethylene-forming enzyme, a protein associated with cytokinin, and a protein associated with auxin. The factors relating to vase life, propagation ability using scions and rooting efficacy are a protein having the ability of inhibiting ethylene-forming enzyme, a protein relating to cytokinin, and a protein relating to auxin, respectively. With the aid of these proteins, the claimed plant is able to have improved rooting efficacy, prolonged vase life and propagation ability using scions. By contrast, the plant described in Kasuga is *Arabidopsis*. As evidenced by *The Plant J.* 38: 982-93 (2004), appended as Exhibit B, *Arabidopsis* appears not to be associated with rooting efficacy, prolonged vase life, and propagation ability via scions. Therefore, the transformed plant disclosed by Kasuga does not inherently possess the properties of the claimed transformed plant.

Furthermore, Kasuga teaches that the plant is transformed by vacuum infiltration (page 268, left column, line 3). The transformation method recited in claims 13 and 14 are not anticipated by Kasuga, and therefore should be patentable.

In light of the above, Applicants respectfully request withdrawal of the anticipation rejection.

### CONCLUSION

Applicants believe that the present application is in condition for allowance. Favorable reconsideration of the application is requested. The Examiner is invited to contact the undersigned directly, should he feel that any issue warrants further consideration.

The Commissioner is hereby authorized to charge any additional fees, which may be required regarding this application under 37 CFR §§ 1.16-1.17, and credit any overpayment to Deposit Account No. 19-0741. Should no proper payment accompany this response, then the Commissioner is authorized to charge the unpaid amount to the same deposit account. If an extension is needed for timely acceptance of submitted papers, Applicants hereby petition for such extension under 37 CFR §1.136 and authorize payment of the relevant fee(s) from the deposit account.

Respectfully submitted,

Date 27 August 2007

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